

	Name:	Morten Lybech Thøgersen
	Date of birth:	November 17, 1969
	Nationality:	Danish
	Profession:	R&D Manager
	Education:	Master of Science in Structural Engineering
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Education

Time period	Content	Place
1997	Master of Science in Engineering, Structural (Civil) Engineering. Thesis in Structural Reliability Theory (probabilistics)	Aalborg University, Denmark
1993	Bachelor of Science in Engineering	The Technical College of Civil (Structural) Engineering, Horsens, Denmark
1990	Higher Preparatory Examination (Corresponding to upper secondary school), Optional subjects: mathematics, physics, chemistry	Frederikshavn Gymnasium og HF-kursus
1988	Technical Assistant, Building and Construction Line	Technical School of Frederikshavn, Denmark

Employment Record

Time period	Title	Place/company	Description
2009-	R&D Manager	EMD International A/S, Aalborg, Denmark	
2008-2009	Senior Software Manager	Innomation ApS / InMoTx	
2001-2007	Software Development (R&D)	Energi- og Miljødata, Aalborg	(WindPRO-software) Wind turbine wake- and turbulence models (analytical and CFD). Estimating extreme winds. Measure correlate-predict module for WindPRO. Integrating GIS into WindPRO. Developing virtual reality module for WindPRO. Creating WindSim CFD interface for WindPRO. Environmental impact analysis. Loss and uncertainty module for WindPRO. Implementing an agile software development approach at EMD.
2001-2002	External Assistant	Risø National Laboratory, (Departments: wind energy and system	Reliability model for offshore wind farms.

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		analysis)	
1999-2001	Scientist	Risø National Laboratory, Department of wind energy	Analyzing structural safety of wind turbines, probabilistic modelling and finite element modelling (FEM/Ansys), Loads on WTGs and load combinations. Fatigue in wind turbines and blades.
1998-1999	Research Assistant	Risø National Laboratory, Department of wind energy	(Tasks as described above)
1993-1995	Structural Engineer	bisco spær (bisco trusses), Egernsund	Statics on roof (wooden) structures using Danish and German codes. Contact with customers, contractors and planners-primarily in Germany. Responsible for computers and net.
1987	Trainee (one year)	Plan-Teknik I/S, Frederikshavn	Surveying, supervision, sewer and road projects. Project administration and office.

Publications / Articles

<i>Measure-Correlate-Predict Methods: Case Studies and Software Implementation</i> , Proceedings from the EWEA conference 2007 in Milan, Italy
<i>Evaluating models for wind turbine wake added turbulence – sensitivity study of the models and case study</i> , Proceedings from the EWEA conference 2006 i Athens (co-author)
<i>Recalibrating wind turbine wake model parameters – validating the wake model performance for large offshore wind farms</i> , Proceedings from the EWEA conference 2006 i Athens (co-author)
<i>Applying New Computer-Aided Tools for Wind Farm Planning and Environmental Impact Analysis</i> : Proceedings from the EWEA conference 2004 in Madrid)
<i>VindPLAN: Redskaber til computer-understøttet vindmølle planlægning</i> (WindPLAN – computer-aided tools for wind turbine planning), Final Report, Energi- og Miljødata, 2003
<i>Virtual reality modelling of wind farms including the countryside</i> , proceedings from the EWEA conference 2004 in Madrid
<i>Decision Analysis for Reliability Assessment</i> , European Safety, Reliability and Data Association (ESReDA), Det Norske Veritas, 2004, ISBN 8251502888 (co-author)
<i>The necessary distance between large wind farms offshore – study</i> , Risø-R-Report, August 2004 (co-author)
<i>Analytical modelling of wind speeds in large offshore wind farms</i> , EWEC conference 2004 in

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London, (co-author)
<i>20 Detailed Case Studies Comparing Project Design Calculations and Actual Energy Productions for Wind Energy Projects World Wide</i> , Energi- og miljødata 2003, ISBN 87-989395-0-5. (co-author)
<i>Power Prediction And Siting – When The Terrain Gets Rough</i> , The World Wind Energy Conference and Exhibition, Berlin 2002 (co-author)
<i>Pålidelighedsmodel for havvindmølleparker</i> (reliability model for offshore wind farms), Christensen, P.; Paulsen, J.L.; Thøgersen, M.L.; Krogh, T.; Raben, N.; Donovan, M.H.; Jørgensen, L.; Winther-Jensen, M, Risø-R-1346(DA) (2002)
<i>Availability for off-shore wind farms</i> . Christensen, P.; Paulsen, J.L.; Thøgersen, M.L.; Winther-Jensen, M.; Raben, N. In: Safety and reliability. Towards a safer world. Proceedings. Vol. 2. ESREL 2001, Torino (IT)
<i>Kalibrering af partielle sikkerhedsfaktorer for udmattelse af vindmøllerotorer</i> (calibration of partial safety factors for wind turbine rotors subjected to fatigue loading), C.J.Christensen, K.O. Ronold, M.L.Thøgersen, Risø-R-1204
<i>Integrated Fatigue Loading for Wind Turbines in Wind Farms</i> , Sten T. Frandsen & Morten L. Thøgersen, Proceedings from OWEMES 2000
<i>Designgrundlag for vindmølleparker på havet</i> (Danish regulations for offshore windfarms), 1 st edition feb. 2000 (co-author)
<i>Sensitivity study using a probabilistic fatigue model</i> , Morten L. Thøgersen, IEA-expert meeting 1999 i Delft, Holland (presentation and paper)
<i>Probabilistic design tool (PRODETO) – Publishable Final Report</i> , EU Joule III project JOR3-CT95-0026, H.Braam, C.J. Christensen, J.J.D. van Dam, G. Larsen, K.O. Ronold, M.L. Thøgersen, K. Argyriadis, J. De Boer, O. Fabian, ECN-C-99-023
<i>Probabilistic design tool (PRODETO) – Final Report</i> , EU Joule III project JOR3-CT95-0026, H.Braam, C.J. Christensen, J.J.D. van Dam, G. Larsen, K.O. Ronold, M.L. Thøgersen, K. Argyriadis, J. De Boer, O. Fabian, ECN-CX-99-046 (confidential)
<i>Case Study of a Micon M1500-600/150 kW Wind Turbine with Aerpac APX40-T Blades</i> , C.J. Christensen, J.T. Petersen, K.O. Ronold, G. Larsen, M.L. Thøgersen, Risø-I-1306 (not public available)
<i>PRODETO, A Computer Code for Probabilistic Fatigue Design</i> , European Wind Energy Conference 1999 (co-author)
<i>Methods for Probabilistic Design of Wind Turbines</i> , H.Braam, J.J.D. van Dam, C.J. Christensen, M.L. Thøgersen, G.C. Larsen, K.O. Ronold, Risø-R-1082
<i>Forskning i vindmøllers sikkerhed (research in structural safety of wind turbines)</i> , C.J. Christensen & M.L. Thøgersen, popular science paper in VE-information, June 1998
<i>Vingers svingningsretning er vigtige for kantsvingninger (importance of the vibration direction of blades with respect to edgewise vibration)</i> , K. Thomsen, J.T. Petersen, M.L. Thøgersen,

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Resultatblad AED-RB-8, Aeroelastisk design 1999
<i>Reliability Analysis of a Cable Stayed Bridge</i> , J. Misfeldt & M.L. Thøgersen, Aalborg University 1997
<i>Reliability Analysis of Wood Structures</i> , J. Misfeldt & M.L. Thøgersen, Aalborg University 1997

Presentations

Time period	Content	Place
2003	<i>Virtual Reality Modeling of Wind Farms including the Countryside.</i> (Oral presentation)	EWEA conference in Madrid
2000	<i>Partialkoefficienter og probabilistiske metoder (partial safety factors and probabilistic methods).</i>	Annual DEA wind energy conference (Energistyrelsen, Billund)
1999	<i>Sensitivity study using a probabilistic fatigue model.</i> (presentation and paper)	IEA-expert meeting in Delft, Holland
1998	Probabilistiske metoder til vindmølledesign (probabilistic methods for design of wind turbines). (Vinddag med fokus på metode og ærktøjsudvikling).	Annual Risø wind energy conference

Participation in Research Projects

Content
<i>Re-calibrating wake models for use in large offshore wind farms</i> , PSO 2005***.
<i>Reliability model for offshore wind farms</i> , Made while employed at Risø (Wind energy department and System Analysis Department) and EMD, in co-operation with Seas. UVE*.
<i>Design guidelines for offshore wind turbines</i> , while employed at Risø. Made in cooperation with Seas, Risø, Elsamprojekt, NIRAS, Rambøl & DNV, EFP99**.
<i>Design calculations for offshore wind farm at Middelgrunden, Copenhagen.</i> In co-operation with seas and Carl Bro, 2000.
<i>Calibration of partial safety factors for rotors subjected to fatigue loading</i> , Risø in co-operation with DNV (Det Norske Veritas), UVE* 98.
<i>Reliability model for offshore wind farms</i> , Risø, Seas & EMD.
<i>Probabilistic Design Tool (PRODETO)</i> , (ECN, Risø, DNV, Germanischer Lloyd, Aerpac og NEG Micon), EU-Joule III.
<i>Program for aeroelasticitet 1998/99 (research programme for aeroelasticity)</i> , (FEM-modelling of blades). EFP98/99**.

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*) UVE = *Udviklingsprogram for vedvarende energi. Public research programme under the Danish Energy Agency, now discontinued (2003).*

***) EFP = *Energiforskningsprogram. Public research program under the Danish Energy Agency.*

***) PSO = *Public service obligation research programme.*

Language Skills

Language	Speaking	Reading	Writing
Danish	Mother tongue	Mother tongue	Mother tongue
English	Good	Good	Good
German	Fair	Fair	Fair